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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/629,464	07/31/2000	Hiroyuki Sayuda	046601-5056	5381

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EXAMINER	
THOMPSON, JAMES A	

ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/629,464	SAYUDA, HIROYUKI	
	Examiner	Art Unit	
	James A. Thompson	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2006 and 29 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 July 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 29 December 2005 has been entered.

Response to Arguments

2. Applicant's arguments filed 29 December 2005 have been fully considered but they are not persuasive. Applicant's arguments have been fully addressed in the Advisory Action mailed 20 January 2006. The present amendments to the claims have been fully considered by Examiner. Prior art rejections based on the present amendments to the claims are set forth in detail below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reber (US Patent 6,138,151) in view of Bhattacharjya (US Patent 6,456,393 B1).

Regarding claims 1 and 10: Reber discloses an image processing apparatus (figure 1 of Reber) comprising an input part (figure 1(44) of Reber) that inputs hyperdocument data (column 5, lines 21-28 of Reber); an embedding data generation part (figure 1(42) of Reber) that generates coupling information (column 4, lines 20-22 and column 5, lines 11-13 of Reber) to specify related information related to an image element constituting a document image (column 5, lines 14-17 of Reber), wherein the related information is represented by an absolute path or is represented by a relative path with reference positional information (column 5, lines 26-40 of Reber); and an embedding part (figure 1(46) of Reber) that uses the coupling information to determine at least a portion of the document to embed the coupling information (column 5, lines 41-50 of Reber), and embeds the coupling information by superimposing over the portion of the document (column 7, lines 13-17 of Reber) to form the document image of the hyperdocument data inputted by the input part (column 7, lines 3-12 of Reber), wherein a configuration of pixels plotted in embedded areas is different from that in ordinary plotting areas (column 7, lines 16-19 of Reber). Since the embedded coupling information is a printed code (column 5, lines 18-22 of Reber) that is to be read by a computer to obtain hyperdocument information (column 5, lines 25-29 and lines 38-40 of Reber), the configuration of pixels plotted in embedded areas is different from that in ordinary plotting areas (column 7, lines 16-19 of Reber). The appearance information is included as part of the hyperdocument information

since many different types of links, such as a telnet window, an html page, an ftp session, *et cetera* can be chosen (column 5, lines 26-40 of Reber). A telnet window looks different from an ftp session, which looks different from a html page, and so on. Furthermore, the path provided by the embedding data generation part is a uniform resource locator (URL), which includes a path (column 5, lines 26-40 of Reber). As is well-known in the art, a URL can be either an absolute path or a relative path with reference positional information.

Reber does not disclose expressly that said coupling information determines at least a portion of the *image element* and is embedded over at least part of the *image element*.

Bhattacharjya discloses embedding computer-readable information (figure 3(30) and column 3, lines 8-17 of Bhattacharjya) over at least part of an image element (figure 5 (32) and column 3, lines 44-51 of Bhattacharjya).

Reber and Bhattacharjya are combinable because they are from the same field of endeavor, namely embedding and encoding digital information in documents. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to embed the coupling information taught by Reber using the method taught by Bhattacharjya through which digital data is encoded directly and unobtrusively on associated text data. The computer-readable information taught by Bhattacharjya would be the coupling information taught by Reber. Thus, the coupling information would determine at least a portion of image element taught by Bhattacharjya. The motivation for doing so would have been to be able to embed said coupling data without affecting the document's appearance to a human reader (column 1, lines 58-63 of Bhattacharjya), which is clearly desirable since such an

embedding would provide valuable information without noticeably reducing the image quality. Therefore, it would have been obvious to combine Bhattacharjya with Reber to obtain the invention as specified in claims 1 and 10.

Further regarding claim 10: The apparatus of claim 1 performs the method of claim 10.

Further regarding claims 2 and 11: Bhattacharjya discloses appearance information (column 3, lines 3-9 of Bhattacharjya) defining the location of embedding on the document image (column 3, lines 8-9 of Bhattacharjya), and embedding is performed based on the appearance information (column 3, lines 8-12 of Bhattacharjya).

Regarding claims 3 and 12: Reber discloses that the coupling information indicates a location of the related information (column 5, lines 21-29 of Reber).

Regarding claims 4 and 13: Reber discloses that the coupling information specifies information indicative of a location of the related information (column 5, lines 21-29 of Reber).

Regarding claims 5 and 14: Reber does not disclose expressly that the coupling information specifies the related information itself.

Bhattacharjya discloses embedding the related information itself into the document data (column 3, lines 8-12 of Bhattacharjya).

Reber and Bhattacharjya are combinable because they are from the same field of endeavor, namely embedding and encoding digital information in documents. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to embed the related information itself, as taught by

Bhattacharjya. The suggestion for doing so would have been that, using the method taught by Bhattacharjya, one can embed data unobtrusively (column 1, lines 58-63 of Bhattacharjya) and thus one could simply embed the related information itself, as taught by Bhattacharjya, instead of only the location of the related information, as taught by Reber. Therefore, it would have been obvious to combine Bhattacharjya with Reber to obtain the invention as specified in claims 5 and 14.

Further regarding claims 6 and 15: Bhattacharjya discloses embedding the coupling information in a form or color in which the coupling information is difficult to identify visually (column 3, lines 12-17 and column 1, lines 58-63 of Bhattacharjya). As discussed above in the arguments regarding claims 1 and 10, embedding is performed with the embedding part taught by Reber.

Further regarding claims 8 and 16: Bhattacharjya discloses that the appearance information is based on logical information (column 3, lines 5-9 of Bhattacharjya). Detecting text blocks clearly requires logical information upon which to base said detection.

Regarding claims 9 and 17: Reber discloses an identification generator (figure 1(10) of Reber) that generates identification (column 3, lines 65-67 of Reber) and manages correspondences between the identification and the coupling information (column 5, lines 11-13 and lines 18-22 of Reber).

Regarding claim 7: Reber discloses an image forming medium (figure 1(12) of Reber) on which an image constituted by an image element is formed (column 3, lines 38-44 of Reber), wherein coupling information (column 5, lines 11-13 of Reber) from hyperdocument data (column 5, lines 25-29 of Reber)

determines at least a portion of the document to embed the coupling information (column 5, lines 41-50 of Reber), specifies related information relating to the image element to be embedded (column 7, lines 12-19 of Reber) such that the related information is represented by an absolute path or is represented by a relative path with reference positional information (column 5, lines 26-40 of Reber), and appearance information from the hyperdocument data (column 5, lines 26-40 of Reber) defines location of embedding in an image document (figure 1(12) and column 5, lines 21-25 of Reber).

Reber does not disclose expressly that said coupling information determines at least a portion of the *image element* and is superimposed over the portion of the image element.

Bhattacharjya discloses embedding computer-readable information (figure 3(30) and column 3, lines 8-17 of Bhattacharjya) over at least part of an image element (figure 5 (32) and column 3, lines 44-51 of Bhattacharjya).

Reber and Bhattacharjya are combinable because they are from the same field of endeavor, namely embedding and encoding digital information in documents. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to embed the coupling information taught by Reber using the method taught by Bhattacharjya through which digital data is encoded directly and unobtrusively on associated text data. Thus, the coupling information would determine at least a portion of image element taught by Bhattacharjya. The motivation for doing so would have been to be able to embed said coupling data without affecting the document's appearance to a human reader (column 1, lines 58-63 of Bhattacharjya), which is clearly desirable since such an embedding would provide valuable

information without noticeably reducing the image quality. Therefore, it would have been obvious to combine Bhattacharjya with Reber to obtain the invention as specified in claim 7.

Regarding claim 18: Reber discloses an image processing apparatus (figure 1 of Reber) comprising an input part (figure 1 (44) of Reber) that inputs hyperdocument data (column 5, lines 21-28 of Reber) and coupling information (column 5, lines 11-13 of Reber) to specify related information related to an image element constituting a document image (column 5, lines 14-17 of Reber), wherein the related information is represented by an absolute path or is represented by a relative path with reference positional information (column 5, lines 26-40 of Reber); and an embedding part (figure 1(46) of Reber) that uses the coupling information to determine at least a portion of the document to embed the coupling information (column 5, lines 41-50 of Reber), wherein the hyperdocument data includes appearance information (column 5, lines 26-40 of Reber) defining location of embedding in the document image (figure 1 (12) and column 5, lines 21-25 of Reber), and embeds the coupling information by superimposing over the portion of the document (column 7, lines 13-17 of Reber) to form the document image of the hyperdocument data inputted by the input part (column 7, lines 3-12 of Reber).

Reber does not disclose expressly that said coupling information determines at least a portion of the *image element* and is embedded over at least part of the *image element;* and that image concentration of the coupling information is changed depending on image concentration of an area which the coupling information is embedded.

Bhattacharjya discloses embedding computer-readable information (figure 3(30) and column 3, lines 8-17 of

Bhattacharjya) over at least part of an image element (figure 5 (32) and column 3, lines 44-51 of Bhattacharjya); and changing the image concentration of the computer-readable information depending on image concentration of an area in which the computer-readable information is embedded (column 3, lines 36-43 of Bhattacharjya). The image concentration of embedded computer-readable information depends upon how the concentration of text present and the precise manner in which the pixels comprising the text portion of the image are arranged (column 3, lines 36-43 of Bhattacharjya).

Reber and Bhattacharjya are combinable because they are from the same field of endeavor, namely embedding and encoding digital information in documents. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to embed the coupling information taught by Reber using the method taught by Bhattacharjya through which digital data is encoded directly and unobtrusively on associated text data. Thus, the coupling information would determine at least a portion of image element taught by Bhattacharjya. The computer-readable information taught by Bhattacharjya would be the coupling information taught by Reber. The motivation for doing so would have been to be able to embed said coupling data without affecting the document's appearance to a human reader (column 1, lines 58-63 of Bhattacharjya), which is clearly desirable since such an embedding would provide valuable information without noticeably reducing the image quality. Therefore, it would have been obvious to combine Bhattacharjya with Reber to obtain the invention as specified in claim 18.

Further regarding claims 19 and 20: Bhattacharjya discloses that computer-readable data encoding is performed by darkening a site and then not darkening a site (binary 1) or not darkening a site and then darkening a site (binary 0) (column 3, lines 44-49 of Bhattacharjya). The encoding processing is performed based on the assumption that the original text pixels are not at maximum darkness (column 3, lines 12-17 of Bhattacharjya). Therefore, areas in which the image has a higher level of maximum darkness text pixels, less computer-readable data can be encoded. Likewise, areas in which the image has a lower level of maximum darkness text pixels, more computer-readable data can be encoded. Therefore, the image concentration of the computer-readable information, which corresponds to the coupling information taught by Reber, increases when the image concentration of the area is lower than a predetermined value, and the image concentration of the computer-readable information decreases when the image concentration of the area is higher than a predetermined value.

Regarding claims 21-24: Reber discloses that the reference positional information (column 5, lines 26-40 of Reber) is embedded in the document image (column 5, lines 45-52 of Reber).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. *HTML by Example*, by Ann Navarro & Todd Stauffer, ©2000 Que, pages 44-48 and 166-167. This reference demonstrates that URL's in general are either absolute paths or relative paths.

b. *HTML Programmer's Reference*, by Thomas A. Powell and Dan Whitworth, ©1998 Osbourne/McGraw-Hill, pages 364-375. This reference also demonstrates that URL's in general are either absolute paths or relative paths.

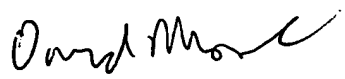
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James A. Thompson
Examiner
Technology Division 2625

05 April 2006



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